How to use DrawBender

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Introduction

DrawBender is a powerful and flexible utility which allows files in Acorn's Draw format to be distorted and squeezed into a new shape, called a 'mould'.

The Draw files may come from a number of sources: from Draw itself; from a utility which converts RISC OS outline fonts, such as FontFX or FontDraw; or from a program such as Poster.

After processing by DrawBender a file may be used in any application which can use Draw files. This naturally includes desktop publishing programs.

Using DrawBender

DrawBender operates as a multi-tasking RISC OS utility. Double-click with the Select button on the !DrawBend application in a directory viewer and the program will install itself on the icon bar.

Clicking Select on the icon opens two windows marked 'Mould' and 'Object'.

The Object window displays the source text or drawing, and the result after it has been processed.

The Mould window displays the shape into which the source text or drawing will be moulded. It also shows the progress of a transformation while it is taking place. (Because complex transformations may take some time they are performed in the background, leaving you in full control of the computer).

A source file is loaded by dragging it into the Object window (point to it with the mouse, then hold down the Select button while you move the pointer into the Object window). A mould file is loaded by dragging it into the Mould window.

Source files must consist of Draw path objects. FontFX is an ideal means of converting text to this form.

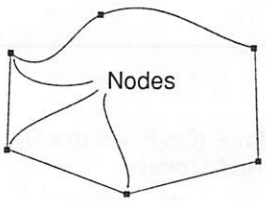
The mould

The mould must be in the form of a path object in a Draw file. Any of the usual path elements (moves, lines, curves) may be used. Please see the computer User Guide for more information on these.

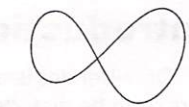
There must be at least four elements. There is no upper limit on the number, providing enough memory is available to process them. The joins between the path elements form 'nodes' and are of special significance, as will become clear later.

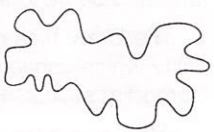
The mould can be of any shape and complexity, but bear in mind that extremely complex moulds may lead to unpredictable results. (This is especially true if the mould is re-entrant, i.e. it overlaps itself). When a mould is dragged into the Mould window a network of points is plotted to give you some idea how the transformation will affect the shape of the source file.

When designing a mould you should do so in a clockwise fashion.

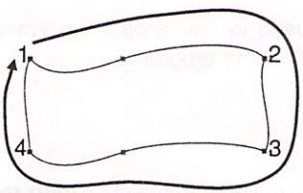


Example of a mould, showing the joins between path elements marked as nodes.





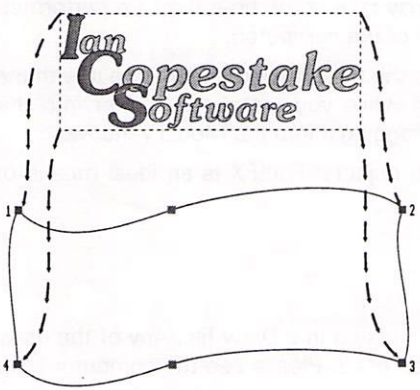
Re-entrant and highly complex moulds like these may produce unpredictable results.



The mould must be defined in a clockwise fashion.

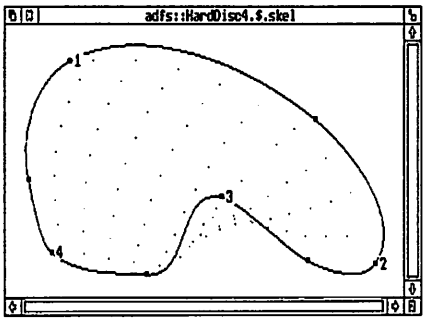
Placing the corners

Four of the nodes in the mould must be designated as the 'corners' of the diagram. The corners of the 'bounding box' of the source file will be mapped to these corner nodes. The choice of corners is very important as it has a great influence on the results of the transformation.

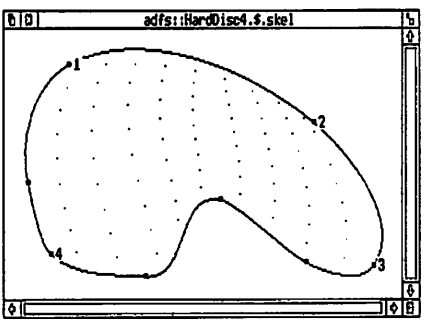


The four corners of the bounding box are mapped onto the four selected nodes in the mould. These 'corner nodes' can be moved simply by dragging them to another node. Alternatively, rotate all four corner nodes at once by clicking Select (anti-clockwise) or Adjust (clockwise). A strictly circular order must be maintained.

When the mould file is first loaded, DrawBender will allocate the four corner nodes in an arbitrary fashion. They are displayed in red and numbered 1 to 4. Corner nodes should not be placed too close together, and should form a roughly rectangular shape. This will ensure reasonably predictable results.

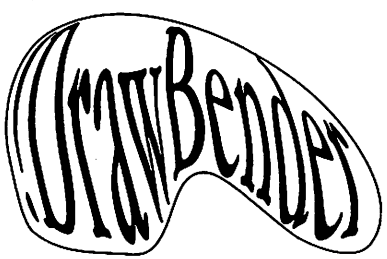


The corner nodes allocated by the program when the mould is first loaded. Notice how the grid points fall outside the mould: this indicates that the transformed file will probably be a mess.

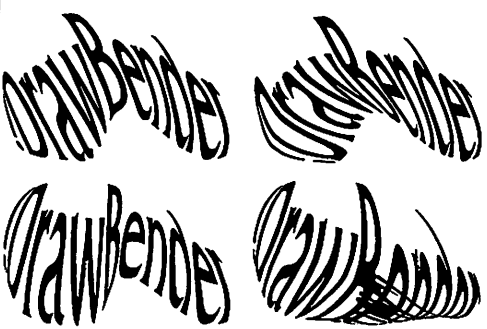


The corner nodes have now been moved to more suitable positions. The network of points no longer extends beyond the boundary.

Many effects are possible as you will see if you experiment. Because of the strong influence corner node placement has on the final results, you can obtain many different distortions from one relatively simple mould.



The result of distorting a graphic, using the mould and corner node placements shown in the previous diagram.



Four more examples, produced using the same mould but different corner node placements. The last one shows the strange effects which can result when the network of points falls outside the boundary.

Starting the transformation

Click the Menu button in the Mould window, then click the Select button to choose the Process option. The Object window will clear and a series of entertaining red lines will start work in the Mould window. The result of the transformation will gradually appear in the Object window.

Saving the result

When the transformation is complete, click the Menu button in the Object window then click the Select button to choose the Save option. Type in a file name and save it in the usual way.

In brief

1. Double-click on the !DrawBend application to install it.
2. Click on the icon bar icon to start DrawBender.
3. Drag a Draw file containing a single path object to the Mould window.
4. Drag the red corner nodes to suitable positions.
5. Drag a Draw file containing the source text or drawing to the Object window.
6. Click Menu in the Mould window and Select the Process option.
7. Click Menu in the Object window and Select the Save option to save the result.

If you have any suggestions or discover any faults, example files will help. We will be very pleased to receive discs illustrating your best work. You might see it in print!

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